CLAIMS

1.   An arc welding robot, comprising:

a manipulator including a welding torch mounted in the vicinity of the leading end

5   thereof;

a control unit for operating the manipulator in a given operation pattern in
accordance with a previously taught operation program, the control unit including therein

a welding part for welding a member to be welded under a given welding
condition in accordance with the operation pattern, and

10   recording means for recording waveform data relating to at least one of a
welding current instruction value, a welding current output value, a welding
voltage instruction value, a welding voltage output value, a welding speed, a wire
feed speed, the number of times of short circuits and a wire feed motor current
during a given period; and,

15   display means for graphically displaying the waveform data recorded in
the recording means.

2.   An arc welding robot as set forth in Claim 1, wherein the recording
means is capable of stopping its recording automatically using at least one of an input

20   trigger, an error stop, an arc on and an arc off as its stop trigger.

3.   An arc welding robot as set forth in Claim 1 or 2, further including
transfer means for transferring the waveform data recorded in the recording means to an
external memory.

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4.   An arc welding robot as set forth in any one of Claims 1 to 3, wherein the
display means includes a display control part for, when displaying the waveform data on a
graph, enlarging and reducing the waveform data in the horizontal axis of the graph, for
changing the scale of the vertical axis of the graph, and for displaying an operation

30   program name, a teach point name and a sampling cycle.

5.   An arc welding robot as set forth in any one of Claims 1 to 4, wherein the

display means includes a display control part for optionally adding or deleting the items of the waveform data to be displayed.

6. An arc welding robot as set forth in any one of Claims 1 to 5, wherein the display means can be used together with display means provided in a teach pendant to be connected to the control unit in order to create an operation program.

7. An arc welding robot as set forth in Claim 3, wherein a portable memory means is used as the external memory and the external memory can be mounted onto and removed from a teach pendant to be connected to the control unit in order to create an operation program.

8. An arc welding robot as set forth in Claim 3, wherein, in a teach pendant to be connected to the control unit in order to create an operation program, there is provided communication means capable of communicating with the external memory.